to be adherent than females (p = 0.05). **CONCLUSIONS:** American Diabetes Association guidelines recommend statin therapy in every diabetes patients of age 40 years and above, regardless of their low-density lipoprotein level. Low adherence can result in the development of cardiovascular diseases, which can lead to increase in outpatient and emergency room visits and hence, increase in the health care costs. Adherence to statins was suboptimal among this study population. This presents an increased risk of developing cardiovascular diseases, which can lead to increases in the health care costs for this self-insured university.

PDB47

IMPROVING OUTCOMES AND PRODUCTIVITY FOR EMPLOYEES WITH DIABETES

Pinto S[1], Partha G[1], Ferrell M[1], Coehrs B[2], Riepenhoff C[2]
[1]University of Toledo, Toledo, OH, USA, [2]Pharmacy Counter, Toledo, OH, USA

OBJECTIVES: To examine the effect of a community pharmacy based medication therapy management program (MTM) on patient outcomes over one year. **METHODS:** A one year, pre-post longitudinal study. Patients served as their own controls. Community pharmacists provided MTM services to the City of Toledo employees and their dependents with diabetes. Employees were seen every 3 months at one of seven participating pharmacy sites. Participants received a 3 month supply of medications at the cost of one co-pay as an incentive. Data collected: quality of life scores (SF-36), self-reported adherence (Modified Morisky scale of 1–5, 1 being always adherent and 5 being never adherent), number of sick days, and patient satisfaction with services (Likert scale of 1–5, 1 being highly unsatisfied and 5 being highly satisfied). Data was analyzed using SPSS v 16.0 for one year using descriptive statistics and Friedman tests. **RESULTS:** One hundred one employees enrolled at baseline. Patients had improved scores on physical functioning, role physical, bodily pain, and social functioning. The physical component summary remained roughly the same. Mental component scores decreased, but not significantly. Self-reported adherence improved significantly from 3.83 to 2.68 ($p < 0.005$) over 12 months. There was a decrease in the use of sick days from 1.13 ± 5.32 at baseline to 0.09 ± 0.39($p = 0.368$) at the end of the study. Patients who reported using sick days at baseline on average reported less use of sick days over one year. Overall patient satisfaction significantly increased from 3.26 to 4.52 ($p < 0.001$) over 12 months. Experience with the pharmacist and experience with pharmacy services were the highest rated items. **CONCLUSIONS:** Improved quality of life and adherence can help increase productivity of employees and can help reduce costs for employers by reducing disease-related missed days of work. Employers looking to save costs and improve productivity can utilize the services provided by pharmacists.

PDB48

ASSESSING QUALITY OF LIFE IN SHORT STATURE YOUTH – THE QOLISSY PROJECT FOCUS GROUP AND COGNITIVE DEBRIEFING EXPERIENCE

Bullinger M[1], Dellenmark Blom M[2], Feigerlova E[3], Herdman M[4], Lunde C[2], Mimoun E[3], Pleil A[5], Power M[6], Quitmann J[1], Rohenkohl A[1], Sanz D[4], Skoropadskaya A[6], Wollmann H[7], Chaplin J[2]
[1]Hamburg University, Hamburg, Germany, [2]The Queen Silvia Children's Hospital, Göteborg, Sweden, [3]Hôpital des enfants, Toulouse, France, [4]Insight Consulting & Research S.L., Barcelona, Spain, [5]Pfizer Incorporated, San Diego, CA, USA, [6]University of Edinburgh, Edinburgh, UK, [7]Pfizer, Ltd, Walton Oaks, UK

OBJECTIVES: Since pediatric growth disorders such as Growth Hormone Deficiency (GHD) and Idiopathic Short Stature (ISS) might affect subjective wellbeing and functioning, treatment outcomes should include assessment of quality of life (QoL). The multinational QoLISSY project aims at developing simultaneously in 5 countries, a targeted instrument to measure outcomes in short stature children in three age groups (4–7, 8–12, & 13–18 yrs.). **METHODS:** The project follows international instrument development guidelines and uses focus groups, cognitive interviewing, and pilot- and field testing. Per country, 24 children (height <–2 SDS) and one of their parents were recruited into focus groups according to age group (8–12 and 13–18 yrs.), gender, diagnosis (ISS/GHD) and GH-treatment (treated and non-treated). Statements derived from focus groups were used to formulate items which were subsequently presented to 24 child-parent pairs per country for cognitive debriefing. Additional focus groups with parents of very young children were also conducted. **RESULTS:** The focus groups included 96 children (age 8–18), 126 parent participants, as well as 38 parents of young children (4–7 yrs.). All material was transcribed and relevant passages reduced to statements (1800 child, 2500 adult) which were further reduced to items (170 child, 209 adult). **CONCLUSIONS:** This process provided rich material for further analysis and a sound basis for pilot testing. Short stature appears to be a main focus of attention for children and their parents, with teasing and bullying as frequent experiences. Some inter-individual and cross-cultural differences in concepts were found, suggesting a more complex model for understanding wellbeing and functioning than first envisioned. These preliminary results showed that a comprehensive taxonomy of psychological outcomes is needed as well as more research regarding the effects of psychological and medical treatment on quality of life of short stature children and their families.

PDB49

AGE-SPECIFIC ORIGINALS: USING THE PEDIATRIC QUALITY OF LIFE™ (PEDSQL™) DIABETES MODULE TO STUDY SIMILARITIES AND DIFFERENCES IN TARGET LANGUAGES

Neewoor S[1], Varni JW[2]
[1]MAPI Institute, Lyon, France, [2]Texas A&M University, College Station, TX, USA

OBJECTIVES: Prior to use in an international study, the PedsQL™ 3.2 Diabetes Module consisting of 5 reports (Teen report, Adult report, Child report, Parent report for teens, Parent report for children) underwent linguistic validation into 10 languages. A rigorous methodology was conducted to ensure conceptual equivalence, cultural relevance and appropriateness of formulations across the 3 age categories. This involved forward / backward translations and testing on a sample of the 3 age groups. 29 out of 32 items being identical in the original, the aim of our study was to investigate if this was the case in the translations, determine a potential pattern should there be differences and make recommendations on the basis of the results. **METHODS:** This investigation was carried out as follows: 1) Comparison of the 29 identical items across the Teen, Adult and Child reports in the 10 translations; 2) identification of differences across the three reports; and 3) determination of a pattern in the differences. **RESULTS:** First results indicate that language versions are relatively similar across the 3 reports with few differences and no identifiable pattern. The differing formulations across age groups are not the same across translations. Differences are not linked to the translation of technical terms, but found in items on general symptoms. **CONCLUSIONS:** The similarities across the 3 age-specific forms for the 10 languages seem to indicate the universal and intergenerational acceptability of the original concepts and their formulations. Given the differences without identifiable pattern across age categories in some languages however, it is recommended to test the understanding of each item through cognitive debriefing on a sample of each age group despite the use of identical formulations in the original. This will ensure appropriate comprehension across age groups and translations and facilitate international comparison and pooling of data.

PDB50

THE IMPACT OF OBESITY AND QUALTY OF LIFE ON MEDICAL AND LOST PRODUCTIVITY COSTS IN DIABETIC PATIENTS

Suh DC[1], Kim CM[2], Kwon JW[1], Jang SM[3], McGuire M[1], Qureshi Z[1]
[1]Rutgers University School of Pharmacy, Piscataway, NJ, USA, [2]Catholic University School of Medicine, Seoul, South Korea, [3]Health Insurance Review Agency, Seoul, South Korea

OBJECTIVES: To examine how obesity and quality of life (QOL) affect medical (MC) and lost productivity costs (LPC) in U.S. adults with diabetes. **METHODS:** A cross sectional study design was applied using the 2003–2006 Medical Expenditure Panel Survey data. The study population consisted of patients aged 18–64 with diabetes, but without immunodeficiency, malignancy, kidney dialysis, or underweight. Diabetic patients' QOL were classified as low (≤25%), medium (> 25%- < 75%), and high (≥75%) based on quartiles of the SF-12 physical component scale(PCS-12) and mental component scale(MCS-12) respectively. Patients' BMI was classified as normal, overweight, and obese. Diabetic complications included heart disease, stroke, retinopathy, neuropathy, and nephropathy. MCs were estimated using a generalized linear regression model with log link and gamma distribution after adjusting for patient characteristics and comorbidities. LPC were calculated based on missed working days due to illness and average hourly wage using a two part model for working adults. All costs were converted to 2008 U.S. dollars. **RESULTS:** The study identified 3,621 diabetic patients. Patients with low PCS-12 had more complications, compared to those with high PCS-12 (17.0% vs. 4.4%). A similar trend was also observed for MCS-12 (11.8% vs. 8.2%). In general, patients with lower PCS-12 had higher MC ($12,203 in low-QOL vs. $3,172 in high-QOL) and LPC ($1,632 in low-QOL vs. $293 in high-QOL). A similar trend was found in the relationship between MCS-12 and both costs, but this relationship was weaker than that of PCS-12. Among patients with medium to high PCS-12, obese patients had higher MC and LPC than normal or overweight patients. **CONCLUSIONS:** Lower levels of QOL were associated with a higher economic burden on diabetic patients, especially the physical QOL component. Among diabetic patients with higher levels of physical QOL that are less confounded by disease severity and complications, the impact of obesity on economic burden was observed.

PDB51

THE IMPACT OF NON-SEVERE HYPOGLYCEMIC EPISODES ON WORK PRODUCTIVITY AND DIABETES MANAGEMENT: A FOUR COUNTRY PERSPECTIVE

Brod M[1], Christensen T[2], Lyager Thomsen T[3], Bushnell D[4]
[1]The Brod Group, Mill Valley, CA, USA, [2]Novo Nordisk A/S, Virum, Denmark, [3]Novo Nordisk, Virum, Denmark, [4]Health Research Associates, Inc., Mountlake Terrace, WA, USA

OBJECTIVES: The objective of the study was to understand of the impact of diabetes-related non-severe hypoglycemic episodes (NSHE's) on work productivity and diabetes management. **METHODS:** A web-based survey was developed based on literature, expert input and 68 patients participating in focus-group or individual interviews. Persons with self-reported diabetes in US, France, Germany, and UK participated in the survey. NSHE's were classified as occurring in the past month, either daytime (while at work or not at work) or during sleep. **RESULTS:** A total of 6756 persons were surveyed of whom 972 (14.4%) worked for pay and had a NSHE. The mean age of the sample was 41.3 ± 13.5. There were no significant country differences for % on insulin vs. oral or % type1 vs. type 2 subjects. Fifty-nine percent of type 1 subjects (range 50.7% in France – 70.9% in US, $p = 0.001$) and 34.8% of type 2